

## CONTENTS

ALLEN, RICHARD K., and GEORGE F. EDMUNDS, JR. A revision of the genus <i>Ephemerella</i> (Ephemeroptera: Ephemerellidae) I. The subgenus <i>Timpanoga</i> .....	51
ANGUS, T. A. Potential usefulness of vinyl latices as stickers .....	254
ANGUS, T. A., and A. M. HEIMPEL. Inhibition of feeding, and blood pH changes, in lepidopterous larvae infected with crystal-forming bacteria .....	352
ARMSTRONG, THOMAS. <i>Swammerdamia caesiella</i> Hbn. (Lepidoptera: Yponomeutidae), a new pest of Japanese plum in the Niagara Peninsula, Ontario .....	340
ATKINS, M. D. A study of the flight of the Douglas-fir beetle, <i>Dendroctonus pseudotsugae</i> Hopk. (Coleoptera: Scolytidae) I. Flight preparation and response .....	283
ATKINS, M. D. A method for the close-up photography of insect behaviour .....	328
BANERJEE, S. K., and D. KEITH McE. KEVAN. A supernumerary compound eye in the grasshopper <i>Eyprepocnemis plorans ornatipes</i> (Walker, 1870) (Orthoptera: Acrididae) .....	399
BRADLEY, G. A. Feeding sites of aphides of the genus <i>Cinara</i> Curtis (Homoptera: Aphididae) in Northwestern Ontario .....	670
BRADLEY, G. A., and D. C. WIGHTON. Description and life-history of a new species of <i>Cinara</i> (Homoptera: Aphididae) from <i>Pinus banksiana</i> Lamb. .....	453
BROWN, C. E. Reproduction of the pine needle scale, <i>Phenacaspis pinifoliae</i> (Fitch) (Homoptera: Diaspididae) .....	529
BROWN, N. R., and R. C. CLARK. Studies of predators of the balsam woolly aphid, <i>Adelges piceae</i> (Ratz.) (Homoptera: Adelgidae) VI. <i>Aphidecta oblitterata</i> (L.) (Coleoptera: Coccinellidae), an introduced predator in Eastern Canada .....	596
BROWN, W. J. <i>Niptus</i> Boield. and allied genera in North America (Coleoptera: Ptinidae) .....	321
BUCHER, G. E. Winter rearing of tent caterpillars, <i>Malacosoma</i> spp. (Lepidoptera: Lasiocampidae) .....	411
BUCKNER, C. H. The assessment of larch sawfly cocoon predation by small mammals .....	275
BUCKNER, C. H. Mortality of cocoons of the larch sawfly, <i>Pristiphora erichsonii</i> (Htg.), in relation to distance from small-mammal tunnels .....	535
CASS, L. M. Damage to cabbage by the clover cutworm, <i>Scotogramma trifolii</i> (Rott.) (Lepidoptera: Phalaenidae) .....	477
CHANT, D. A. Description of a new species of <i>Typhlodromus</i> (Acarina: Phytoseiidae) from eastern Asia .....	29
CHANT, D. A., H. A. DENMARK, and E. W. BAKER. A new subfamily, Macroseiinae nov., of the family Phytoseiidae (Acarina: Gamasina) .....	808
CHILLCOTT, J. G. The <i>Pegomya hyoscyami</i> (spinach leaf miner) complex in North America (Diptera: Muscidae) .....	167
CHILLCOTT, J. G. Studies on the genus <i>Rhamphomyia</i> Meigen: a revision of the Nearctic species of the <i>basalis</i> group of the subgenus <i>Pararhamphomyia</i> Frey (Diptera: Empididae) .....	257
CLARK, R. C., and N. R. BROWN. A field cage for rearing syrphid larvae and other predators of the balsam woolly aphid, <i>Adelges piceae</i> (Ratz.) (Homoptera: Adelgidae) .....	723
CRAM, W. T., and N. V. TONKS. Note on occurrence in British Columbia of the omnivorous leaf-tier, <i>Cnephasia longana</i> (Haw.) (Lepidoptera: Tortricidae), as a pest of strawberry .....	155

## CONTENTS

ALLEN, RICHARD K., and GEORGE F. EDMUNDS, JR. A revision of the genus <i>Ephemerella</i> (Ephemeroptera: Ephemerellidae) I. The subgenus <i>Timpanoga</i> .....	51
ANGUS, T. A. Potential usefulness of vinyl latices as stickers .....	254
ANGUS, T. A., and A. M. HEIMPEL. Inhibition of feeding, and blood pH changes, in lepidopterous larvae infected with crystal-forming bacteria .....	352
ARMSTRONG, THOMAS. <i>Swammerdamia caesiella</i> Hbn. (Lepidoptera: Yponomeutidae), a new pest of Japanese plum in the Niagara Peninsula, Ontario .....	340
ATKINS, M. D. A study of the flight of the Douglas-fir beetle, <i>Dendroctonus pseudotsugae</i> Hopk. (Coleoptera: Scolytidae) I. Flight preparation and response .....	283
ATKINS, M. D. A method for the close-up photography of insect behaviour .....	328
BANERJEE, S. K., and D. KEITH McE. KEVAN. A supernumerary compound eye in the grasshopper <i>Eyprepocnemis plorans ornatipes</i> (Walker, 1870) (Orthoptera: Acrididae) .....	399
BRADLEY, G. A. Feeding sites of aphides of the genus <i>Cinara</i> Curtis (Homoptera: Aphididae) in Northwestern Ontario .....	670
BRADLEY, G. A., and D. C. WIGHTON. Description and life-history of a new species of <i>Cinara</i> (Homoptera: Aphididae) from <i>Pinus banksiana</i> Lamb. .....	453
BROWN, C. E. Reproduction of the pine needle scale, <i>Phenacaspis pinifoliae</i> (Fitch) (Homoptera: Diaspididae) .....	529
BROWN, N. R., and R. C. CLARK. Studies of predators of the balsam woolly aphid, <i>Adelges piceae</i> (Ratz.) (Homoptera: Adelgidae) VI. <i>Aphidecta oblitterata</i> (L.) (Coleoptera: Coccinellidae), an introduced predator in Eastern Canada .....	596
BROWN, W. J. <i>Niptus</i> Boield. and allied genera in North America (Coleoptera: Ptinidae) .....	321
BUCHER, G. E. Winter rearing of tent caterpillars, <i>Malacosoma</i> spp. (Lepidoptera: Lasiocampidae) .....	411
BUCKNER, C. H. The assessment of larch sawfly cocoon predation by small mammals .....	275
BUCKNER, C. H. Mortality of cocoons of the larch sawfly, <i>Pristiphora erichsonii</i> (Htg.), in relation to distance from small-mammal tunnels .....	535
CASS, L. M. Damage to cabbage by the clover cutworm, <i>Scotogramma trifolii</i> (Rott.) (Lepidoptera: Phalaenidae) .....	477
CHANT, D. A. Description of a new species of <i>Typhlodromus</i> (Acarina: Phytoseiidae) from eastern Asia .....	29
CHANT, D. A., H. A. DENMARK, and E. W. BAKER. A new subfamily, Macroscelinae nov., of the family Phytoseiidae (Acarina: Gamasina) .....	808
CHILLCOTT, J. G. The <i>Pegomya hyoscyami</i> (spinach leaf miner) complex in North America (Diptera: Muscidae) .....	167
CHILLCOTT, J. G. Studies on the genus <i>Rhamphomyia</i> Meigen: a revision of the Nearctic species of the <i>basalis</i> group of the subgenus <i>Pararhamphomyia</i> Frey (Diptera: Empididae) .....	257
CLARK, R. C., and N. R. BROWN. A field cage for rearing syrphid larvae and other predators of the balsam woolly aphid, <i>Adelges piceae</i> (Ratz.) (Homoptera: Adelgidae) .....	723
CRAM, W. T., and N. V. TONKS. Note on occurrence in British Columbia of the omnivorous leaf-tier, <i>Cnephasia longana</i> (Haw.) (Lepidoptera: Tortricidae), as a pest of strawberry .....	155

	CUMMING, MARGARET E. P. The biology of <i>Adelges cooleyi</i> (Gill.) (Homoptera: Phylloxeridae)	601
	DAVIES, D. M. Seasonal variation of tabanids (Diptera) in Algonquin Park, Ontario	548
51 54	DETHIER, V. G. Egg-laying habits of Lepidoptera in relation to available food	554
52	DETHIER, V. G. Food-plant distribution, and density and larval dispersal as factors affecting insect populations	581
40	DONDALE, C. D. Definition of the genus <i>Grammonota</i> (Araneae: Erigo- nidae), with descriptions of seven new species	232
	DOWNES, J. A. The gypsy moth and some possibilities of the control of insects by genetical means	661
83 28	EIDT, D. C. Mode of feeding of the larva of <i>Ctenicera aeripennis destructor</i> (Brown) (Coleoptera: Elateridae)	97
	FINLAYSON, THELMA. Note on a cycloptic specimen of <i>Lamachus</i> sp. (Hymenoptera: Ichneumonidae)	814
99	FINNEGAN, R. J. The pales weevil, <i>Hylobius pales</i> (Hbst.), in Southern Ontario	664
70	FORBES, A. R. Three new records of aphids (Homoptera: Aphididae) in British Columbia	121
53	FOX, C. J. S. Note on the effect of spring flooding on a population of wireworms (Coleoptera: Elateridae)	813
29	FREDEEN, F. J. H. Rearing black flies in the laboratory (Diptera: Simu- liidae)	73
	FREDEEN, F. J. H. Collection, extraction, sterilization and low-temperature storage of black-fly eggs (Diptera: Simuliidae)	450
96	GARDINER, L. M., and D. M. MACLEOD. An entomogenous fungus on <i>Acmaeops proteus</i> (Kby.) (Coleoptera: Cerambycidae)	62
21	GEORGE, J. A. Note on two species of leafhoppers (Homoptera: Cicadel- lidae) new to Canada	253
11	GEORGE, J. A. Note on <i>Epigonatopus plesius</i> (Fenton) (Hymenoptera: Dryinidae), a parasite of the six-spotted leafhopper, <i>Macrostelus fasci- frons</i> (Stål), in Ontario	256
75	GEORGE, J. A., and T. R. DAVIDSON. Notes on life-history and rearing of <i>Colladonus clitellarius</i> (Say) (Homoptera: Cicadellidae)	376
35	GRIFFITHS, K. J. Observations on the European pine sawfly, <i>Neodiprion sertifer</i> (Geoff.), and its parasites in Southern Ontario	501
77	GUPPY, J. C. Four Hymenoptera newly recorded as parasites of the army- worm, <i>Pseudaletia unipuncta</i> (Haw.) (Lepidoptera: Noctuidae)	426
29	HARPER, A. M. Gall aphids on poplar in Alberta I. Descriptions of galls and distributions of aphids	489
08	HARPER, A. M. Gall aphids on poplar in Alberta II. Periods of emergence from galls, reproductive capacities, and predators of aphids in galls	680
67	HEDLIN, A. F. Description and habits of a new species of <i>Phytophaga</i> (Diptera: Cecidomyiidae) from western red cedar cones	719
57	HEINRICH, GERD H. Revisional notes on the Provancher types of Ichneu- moninae (Hymenoptera)	806
	HERBERT, H. J. Note on feeding ranges of six species of predaceous mites (Acarina: Phytoseiidae) in the laboratory	812
23	HILLE RIS LAMBERS, D., and M. E. MACGILLIVRAY. Scientific names of potato-infesting aphids	321
55	HOBBS, G. A., W. O. NUMMI, and J. F. VIROSTEK. History of the alfalfa weevil, <i>Hypera postica</i> (Gyll.) (Coleoptera: Curculionidae), in Alberta	562

HOLLAND, GEORGE P. An unusual case of teratology in Siphonaptera .....	703
HOLLING, C. S. The components of predation as revealed by a study of small mammal predation of the European pine sawfly .....	293
HOLLING, C. S. Some characteristics of simple types of predation and parasitism .....	385
HOWDEN, HENRY F. A new species of <i>Isonychus</i> Mannerheim from southern Arizona (Coleoptera: Scarabaeidae) .....	59
HOWDEN, HENRY F. A new species of <i>Anoplodera</i> Mulsant in the <i>mutabilisaspera</i> group (Coleoptera: Cerambycidae) .....	157
HOWDEN, HENRY F. Descriptions of two new species of <i>Cyrtinus</i> LeConte, with a key to the New World Cyrtinini (Coleoptera: Cerambycidae) .....	372
HUDON, MARCEL. First record of <i>Perilitus coccinellae</i> (Schrank) (Hymenoptera: Braconidae) as a parasite of <i>Coccinella novemnotata</i> Hbst. and <i>Coleomegilla maculata lengi</i> Timb. (Coleoptera: Coccinellidae) in Canada .....	63
HUDON, MARCEL. <i>Scambus pterophori</i> (Ashm.) (Hymenoptera: Ichneumonidae), a new parasite of the European corn borer, <i>Pyrausta nubilalis</i> (Hbn.) (Lepidoptera: Pyralidae), in Canada .....	128
IVES, W. G. H. A technique for estimating tamarack foliage production, a basis for detailed population studies of the larch sawfly .....	513
IVES, W. G. H., and R. M. PRENTICE. Estimation of parasitism of larch sawfly cocoons by <i>Bessa harveyi</i> Tnsd. in survey collections .....	496
IVES, W. G. H., and W. J. TURNOCK. Estimation of cocoon populations of the larch sawfly, <i>Pristiphora erichsonii</i> (Hartig) .....	650
JUDD, W. W. Studies of the Byron Bog in Southwestern Ontario X. Inquilines and victims of the pitcher plant, <i>Sarracenia purpurea</i> L. ....	171
JUDD, W. W. Hymenoptera reared from the mossy rose gall caused by <i>Diplolepis rosae</i> (L.) (Hymenoptera: Cynipidae) .....	727
JUILLET, J. A. Morphology of immature stages, life-history, and behaviour of three hymenopterous parasites of the European pine shoot moth, <i>Rhyacionia buoliana</i> (Schiff.) (Lepidoptera: Olethreutidae) .....	709
KELTON, LEONARD A. Synopsis of the genus <i>Semium</i> , and description of a new species from Mexico (Hemiptera: Miridae) .....	242
KELTON, LEONARD A., and HARRY H. KNIGHT. A new species of <i>Paradacerla</i> from Mexico, and synopsis of the genus in North America (Hemiptera: Miridae) .....	122
LAFRANCE, J., and J. P. PERRON. Notes on life-history of the onion maggot, <i>Hylemya antiqua</i> (Meig.) (Diptera: Anthomyiidae), in sandy and organic soils .....	633
LEROUX, E. J., and C. REIMER. Variation between samples of immature stages, and of mortalities from some factors, of the eye-spotted bud moth, <i>Spilonota ocellana</i> (D. & S.) (Lepidoptera: Olethreutidae), and the pistol casebearer, <i>Coleophora serratella</i> (L.) (Lepidoptera: Coleophoridae), on apple in Quebec .....	428
LEWIS, FRANKLIN B. Abundance and seasonal distribution of the common species of Ceratopogonidae (Diptera) occurring in the state of Connecticut .....	15
LILLY, C. E. Response of <i>Limonius californicus</i> (Mann.) (Coleoptera: Elateridae) to a sex attractant separable by paper chromatography .....	145
LINDQUIST, O. H. A key to the larvae of leaf-mining sawflies on birch in Ontario with notes on their biology .....	625
MACDONALD, D. R. Biological assessment of aerial forest spraying against spruce budworm in New Brunswick III. Effects on two overwintering parasites .....	330

03	MACGILLIVRAY, M. E. Some aphids from Bermuda (Homoptera) .....	638
93	MACLELLAN, C. R. Woodpeckers as predators of the codling moth in Nova Scotia .....	673
85	MALTAIS, J. B. Feeding the pea aphid, <i>Acyrtosiphon pisum</i> (Harr.) (Homoptera: Aphididae), on plant cuttings in organic nutrient solutions .....	336
59	MARTIN, J. LYNTON. The bionomics of the pine bud moth, <i>Exoteleia do- decella</i> L. (Lepidoptera: Gelechiidae), in Ontario .....	5
57	MASON, W. R. M. Some new Braconidae (Hymenoptera) .....	42
72	MCGINNIS, A. J., and R. KASTING. Note on a method of comparing diets for the pale western cutworm, <i>Agrotis orthogonia</i> Morr. (Lepidoptera: Noctuidae) .....	742
	MCGUGAN, B. M., and J. R. BLAIS. Spruce budworm parasite studies in Northwestern Ontario .....	758
63	McMULLEN, L. H., and M. D. ATKINS. Life-history and habits of <i>Scolytus tsugae</i> (Swaine) (Coleoptera: Scolytidae) in the interior of British Columbia .....	416
28	MEDLER, J. T. A note on <i>Megachile centuncularis</i> (Linn.) in Wisconsin (Hymenoptera: Megachilidae) .....	113
13	MILLER, O. A. The interaction of the spruce budworm, <i>Choristoneura fumiferana</i> (Clem.), and the parasite <i>Apanteles fumiferanae</i> Vier. ....	457
96	MILLER, L. A., and R. J. McCLANAHAN. Note on occurrence of the fungus <i>Empusa muscae</i> Cohn on adults of the onion maggot, <i>Hylemya antiqua</i> (Meig.) (Diptera: Anthomyiidae) .....	525
50	MORRIS, RAY F. Note on occurrence and nesting habits of <i>Ancistrocerus waldenii</i> (Vier.) (Hymenoptera: Vespidae) in Newfoundland .....	500
71	MUNROE, EUGENE. Canadian species of <i>Dioryctria</i> Zeller (Lepidoptera: Pyalidae) .....	65
27	MUNROE, EUGENE. New Pyralidae from the Papuan region (Lepidoptera)	102
	MUNROE, EUGENE. Pyralidae from the collection of the California Academy of Sciences (Lepidoptera) .....	161
09	MUNROE, EUGENE. The <i>phlogosaria</i> complex of the genus <i>Plagodis</i> (Lepi- doptera: Geometridae) .....	193
42	MUNROE, EUGENE. New genera and species of Pyralidae (Lepidoptera) ...	359
	MUNROE, EUGENE. Four new species of <i>Evergestis</i> (Lepidoptera: Pyra- lidae) .....	406
22	MUNROE, EUGENE. Revision of the genus <i>Linosta</i> Möschler (Lepidoptera: Pyralidae) with characterization of the subfamily Linostinae and a new subfamily .....	485
33	MUNROE, EUGENE. New species and a new subspecies of <i>Palpita</i> (Lepidop- tera: Pyralidae) .....	641
	MUNROE, EUGENE. Pyralidae collected in Lower California by Mr. J. Powell (Lepidoptera) .....	725
28	MUTCHMOR, J. A. Some factors influencing the occurrence and size of the midsummer flight of the European corn borer, <i>Ostrinia nubilalis</i> (Hbn.) (Lepidoptera: Pyralidae), in Southwestern Ontario .....	796
15	O'ROURKE, FERGUS J. <i>Anopheles</i> and the problem of malaria in Canada ...	346
45	PARADIS, R. O. Note on <i>Rhabdopterus praetextus</i> (Say) (Coleoptera: Chrysomelidae) as an apple pest in Quebec .....	40
25	PETERSON, B. V. Observations on mating, feeding and oviposition of some Utah species of black flies (Diptera: Simuliidae) .....	147
30	PUTMAN, WM. L. Hibernation sites of phytoseiids (Acarina: Phyto- seiidae) in Ontario peach orchards .....	735

PUTMAN, WM. L., and D. C. HERNE. Gross effects of some pesticides on populations of phytophagous mites in Ontario peach orchards and their economic implications .....	567
REIMER, C. Statistical analysis of percentages based on unequal numbers, with examples from entomological research .....	88
RICHARDS, W. R. A new genus and three new species of Aphididae (Homoptera) .....	248
RIEGERT, P. WM. Humidity reactions of <i>Melanoplus bivittatus</i> (Say) and <i>Camula pellucida</i> Scudd. (Orthoptera: Acrididae): reactions of normal grasshoppers .....	35
RIVARD, I. Influence of humidity on longevity, fecundity, and rate of increase of the grain-infesting mite <i>Tyrophagus castellani</i> (Hirst) (Acarina: Acaridae) reared on mould cultures .....	31
ROBINSON, A. G. Note on fecundity of the pea aphid, <i>Acyrtosiphon pisum</i> (Harris), caged on plants of broad bean, <i>Vicia faba</i> L., treated with various plant growth regulators .....	527
ROSS, D. A. Abdominal characters of <i>Dioryctria</i> pupae (Lepidoptera: Pyralidae) from British Columbia .....	731
ROSS, W. A. William Robin Thompson .....	3
RYAN, ROGER B. Termination of diapause in the Douglas-fir beetle, <i>Dendroctonus pseudotsugae</i> Hopkins (Coleoptera: Scolytidae), as an aid to continuous laboratory rearing .....	520
SALKELD, E. H. Notes on anatomy, life-history and behaviour of <i>Aphaereta pallipes</i> (Say) (Hymenoptera: Braconidae), a parasite of the onion maggot, <i>Hylemya antiqua</i> (Meig.) .....	93
SHEMANCHUK, J. A. Note on <i>Coelomomyces psorophorae</i> Couch, a fungus parasitic on mosquito larvae .....	743
SHEWELL, G. E. New Canadian black flies (Diptera: Simuliidae) II .....	83
SHEWELL, G. E. New Canadian black flies (Diptera: Simuliidae) III .....	686
SMEREKA, E. P., and A. C. HODSON. Some humidity and light reactions of the granary weevil, <i>Sitophilus granarius</i> (L.) (Coleoptera: Curculionidae) .....	784
SMIRNOFF, W. A. Predators of <i>Neodiprion swainei</i> Midd. (Hymenoptera: Tenthredinidae) larval vectors of virus diseases .....	246
SMIRNOFF, W. A., and R. BÉIQUE. On a polyhedral disease of <i>Trichocampus viminalis</i> (Fall.) larvae (Hymenoptera: Tenthredinidae) .....	379
SMITH, D. S. Note on destruction of grasshopper eggs by the field cricket <i>Acheta assimilis luctuosus</i> (Serville) (Orthoptera: Gryllidae) .....	127
SMITH, J. MORRIS. Notes on insects, especially <i>Gynmaetron</i> spp. (Coleoptera: Curculionidae), associated with toadflax, <i>Linaria vulgaris</i> Mill. (Scrophulariaceae), in North America .....	117
SMITH, R. W. Status in Ontario of <i>Collyria calcitrator</i> (Grav.) (Hymenoptera: Ichneumonidae) and of <i>Pediobius beneficus</i> (Gahan) (Hymenoptera: Eulophidae) as parasites of the European wheat stem sawfly, <i>Cephus pygmaeus</i> (L.) (Hymenoptera: Cephidae) .....	697
SULLIVAN, C. R. The effect of light and temperature on the behaviour of adults of the white pine weevil, <i>Pissodes strobi</i> Peck .....	213
SWAILES, G. E. Resistance in rutabagas to the cabbage maggot, <i>Hylemya brassicae</i> (Bouché) (Diptera: Anthomyiidae) .....	700
TUNNOCK, A., and J. A. RUDINSKY. Observations in the life-cycle of the balsam woolly aphid, <i>Adelges piceae</i> (Ratz.), in the Willamette Valley of Oregon .....	208
WALLEY, G. S. A new species of <i>Casimarai</i> from British Columbia (Hymenoptera: Ichneumonidae) .....	565

567	WATSON, W. Y. The larva of <i>Profenusa alumma</i> (MacG.) (Hymenoptera: Tenthredinidae) .....	618
88	WATSON, W. Y., and A. P. ARTHUR. Parasites of the European pine shoot moth, <i>Rhyacionia buoliana</i> (Schiff.), in Ontario .....	478
248	WATT, K. E. F. A mathematical model for the densities of attacked and attacking species on the number attacked .....	129
	WIGGINS, GLENN B. A method of rearing caddisflies (Trichoptera) .....	402
	WIGGINS, GLENN B. A new family of Trichoptera from Asia .....	745
35	WISHART, GEO., and D. F. RIORDAN. Flight responses to various sounds by adult males of <i>Aedes aegypti</i> (L.) (Diptera: Culicidae) .....	181
31	WONG, H. R., J. H. DROUIN, and B. B. McLEOD. Observations on a "complex" of insects in tops of black spruce in Manitoba and Saskatchewan .....	543
527	WRESSELL, H. B., and GEO. WISHART. Note on occurrence of <i>Horogenes punctorius</i> (Roman) (Hymenoptera: Ichneumonidae), a parasite of the European corn borer, <i>Ostrinia nubilalis</i> (Hbn.) (Lepidoptera: Pyralidae), in Southwestern Ontario .....	579

## BOOK REVIEWS

520	DUPORTE, E. MELVILLE. Manual of insect morphology. Reviewed by David F. Hardwick .....	600
93	ESSIG, E. O. Insects and mites of western North America. Reviewed by Eugene Munroe .....	191
743	HERING, E. M. Bestimmungstabellen des Blattminen von Europa. Reviewed by T. N. Freeman .....	383
83	LINSLEY, E. G., and J. W. MACSWAIN. Ethology of some <i>Ranunculus</i> insects with emphasis on competition for pollen. Reviewed by G. Stuart Walley .....	815
586	ROZEN, JEROME G. Monographic study of the genus <i>Nomadopsis</i> Ashmead (Hymenoptera: Andrenidae). O. Peck .....	126
84	SCHWATSCHEK, BERNARD. Die Larvalsystematik der Wickler (Tortricidae and Carposinidae). Reviewed by Eugene Munroe .....	382
246	TIMBERLAKE, P. H. A revisional study of the bees of the genus <i>Perdita</i> F. Smith, with special reference to the fauna of the Pacific Coast. Part III. Reviewed by O. Peck .....	4
79	WALKER, EDMUND M. The Odonata of Canada and Alaska. Vol. II. Reviewed by G. Stuart Walley .....	291
27	WILLIAMS, C. B. Insect migration. Reviewed by Eugene Munroe .....	383
17	ZIMMERMAN, ELWOOD C. Insects of Hawaii. Vol. VII. Macrolepidoptera. Reviewed by Eugene Munroe .....	816

## NOTICES AND REPORTS

13	Results of election of officers .....	528
00	International Commission on Zoological Nomenclature: notice of proposed use of Plenary Powers in certain cases .....	672
08	Joint annual meeting of Entomological Society of Canada, Entomological Society of Ontario and Entomological Society of America, Detroit, November 30 to December 3, 1959 .....	282

# INDEX OF NEW TAXA

<i>abditus</i> Brown, <i>Niptus</i> .....	631	<i>koepcke</i> Munroe, <i>Evergestis</i> .....	406
<i>ambocnema</i> Chillcott, <i>Rhamphomyia</i> .....	267	<i>laricellae</i> Mason, <i>Apanteles</i> .....	45
<i>andina</i> Munroe, <i>Linosta sinceralis</i> .....	487	<i>latifascia</i> Munroe, <i>Eoophyla</i> .....	105
<i>angusta</i> Dondale, <i>Grammonota</i> .....	234	<i>latipennis</i> Munroe, <i>Eoophyla</i> .....	103
<i>annulifera</i> Munroe, <i>Linosta</i> .....	485	<i>longistylatum</i> Shewell, <i>Simulium</i> .....	84
<i>anticlina</i> Munroe, <i>Evergestis</i> .....	408	Macroseinae Chant, Denmark and Baker .....	808
<i>antofagastalis</i> Munroe, <i>Evergestis</i> .....	410	<i>Macroseius</i> Chant, Denmark and Baker .....	808
<i>antofagastalis</i> Munroe, <i>Rhectosomia</i> .....	367	<i>major</i> Munroe, <i>Megastes</i> .....	360
<i>arctotibia</i> Chillcott, <i>Rhamphomyia</i> .....	271	<i>Malleria</i> Munroe .....	370
<i>argenteofulva</i> Munroe, <i>Malleria</i> .....	371	<i>melanolopbiae</i> Walley, <i>Casitaria</i> .....	565
<i>arizonensis</i> Howden, <i>Isonychus</i> .....	59	<i>mockfordi</i> Howden, <i>Cyrtinus</i> .....	373
<i>aurantifusa</i> Munroe, <i>Margarosticha</i> .....	110	<i>naranja</i> Munroe, <i>Polygrammodes</i> .....	162
<i>aurora</i> Munroe, <i>Syllepsis</i> .....	359	<i>nesiotes</i> Munroe, <i>Margarosticha</i> .....	110
<i>barnesi</i> Dondale, <i>Grammonota</i> .....	236	<i>nodulus</i> Richards, <i>Brachycolus</i> .....	251
<i>bi clavata</i> Shewell, <i>Twinnia</i> .....	686	<i>nomophiloides</i> Munroe, <i>Rhectosomia</i> .....	366
<i>biscutatus</i> Chant, Denmark and Baker .....	808	<i>obscura</i> Munroe, <i>Glyphodes</i> .....	102
<i>bobarti</i> Munroe, <i>Callilitha</i> .....	164	<i>pacifica</i> Allen and Edmunds, <i>Ephemerella</i> .....	57
<i>bowmanaria</i> Munroe, <i>Plagodis pblogosaria</i> .....	198	<i>papuensis</i> Munroe, <i>Margarosticha</i> .....	109
<i>braziliensis</i> Munroe, <i>Palpita</i> .....	649	<i>Pectinobotys</i> Munroe .....	359
<i>braziliensis</i> Munroe, <i>Rhectosomia</i> .....	364	<i>persimilis</i> Munroe, <i>Eoophyla</i> .....	106
<i>brevifrons</i> Howden, <i>Anoplodera</i> .....	158	<i>persimilis</i> Munroe, <i>Palpita</i> .....	644
<i>brunnea</i> Munroe, <i>Evergestis</i> .....	406	<i>phaloniae</i> Mason, <i>Chelonus</i> .....	49
<i>Callilitha</i> Munroe .....	164	<i>Phryganopsyche</i> Wiggins .....	745, 753
<i>caudatum</i> Shewell, <i>Prosimulium</i> .....	688	<i>Phryganopsychidae</i> Wiggins .....	752
<i>centralis</i> Munroe, <i>Linosta sinceralis</i> .....	487	<i>piniradicis</i> Bradley, <i>Cimara</i> .....	453
<i>cocosica</i> Munroe, <i>Mecyna</i> .....	161	<i>plattmanni</i> Munroe, <i>Linosta sinceralis</i> .....	488
<i>coloradensis</i> Dondale, <i>Grammonota</i> .....	240	<i>powelli</i> Munroe, <i>Gyros</i> .....	726
<i>contiguus</i> Chant, <i>Typhlodromus</i> .....	29	<i>prava</i> Chillcott, <i>Rhamphomyia</i> .....	266
<i>Cybalomiinae</i> Munroe .....	485	<i>pseudotsugella</i> Munroe, <i>Dioryctria</i> .....	68
<i>disparata</i> Dondale, <i>Grammonota</i> .....	237	<i>rossi</i> Munroe, <i>Dioryctria</i> .....	65
<i>enypiae</i> Mason, <i>Apanteles</i> .....	47	<i>rubronotum</i> Kelton, <i>Semiun</i> .....	244
<i>falcipedia</i> Chillcott, <i>Rhamphomyia</i> .....	268	<i>salalicus</i> Mason, <i>Apanteles</i> .....	42
<i>flicornis</i> Munroe, <i>Desmia</i> .....	161	<i>salicifoliellae</i> Mason, <i>Apanteles</i> .....	43
<i>Fimbriaphis</i> Richards .....	248	<i>sandersoni</i> Howden, <i>Cyrtinus</i> .....	374
<i>fimbriata</i> Richards, <i>Fimbriaphis</i> .....	250	<i>striata</i> Munroe, <i>Rhectosomia</i> .....	370
<i>forbesi</i> Richards, <i>Amphorophora</i> .....	251	<i>subarctica</i> Dondale, <i>Grammonota</i> .....	240
<i>forficifera</i> Munroe, <i>Palpita</i> .....	644	<i>tenaruensis</i> Munroe, <i>Callilitha</i> .....	166
<i>formosum</i> Shewell, <i>Prosimulium</i> .....	692	<i>thaumasia</i> Munroe, <i>Ghesquieriellana</i> .....	362
<i>fulvithorax</i> Shewell, <i>Prosimulium</i> .....	694	<i>thomasi</i> Munroe, <i>Eoophyla</i> .....	106
<i>gourbeyrensis</i> Munroe, <i>Palpita isoscelalis</i> .....	647	<i>tkujae</i> Hedlin, <i>Phytophaga</i> .....	719
<i>Hagenomyia</i> Shewell (subgenus) .....	83	<i>tolucensis</i> Chillcott, <i>Rhamphomyia</i> .....	273
<i>kirsuta</i> Kelton and Knight, <i>Paradacerta</i> .....	125	<i>travassosi</i> Munroe, <i>Palpita</i> .....	649
<i>bypsela</i> Chillcott, <i>Rhamphomyia</i> .....	272	<i>trifurcata</i> Munroe, <i>Palpita</i> .....	646
<i>illinoiaria</i> Munroe, <i>Plagodis pblogosaria</i> .....	206	<i>versicolor</i> Chillcott, <i>Rhamphomyia</i> .....	269
<i>jamaicensis</i> Dondale, <i>Grammonota</i> .....	237	<i>viettei</i> Munroe, <i>Palpita</i> .....	642
<i>jubata</i> Chillcott, <i>Rhamphomyia</i> .....	266	<i>viriditincta</i> Munroe, <i>Rhectosomia</i> .....	366
<i>kelleri</i> Brown, <i>Pseudeurostus</i> .....	628	<i>woytowskii</i> Munroe, <i>Pectinobotys</i> .....	359
<i>kimballi</i> Munroe, <i>Palpita</i> .....	641	<i>zephyra</i> Dondale, <i>Grammonota</i> .....	240

6  
5  
5  
3  
4

8  
8  
50  
70  
55  
73  
62  
10  
51  
66  
02

57  
109  
359  
106  
644  
49

753  
752  
453  
488  
726  
266

68  
65  
244  
42  
43

374  
370  
240  
166  
362  
106

719  
273  
649  
646  
269  
642  
366  
359  
240